



Predictors of Officer Success

Sponsored by N00T and N13

Ann Parcell
Apriel Hodari

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Why Look at Predictors of Officer Success?

- Accessions determine personnel inventory far in the future
- Need to know if certain attributes at accession help predict long term success
- If so, accession policy should exploit them

Key Questions



- To what extent does accession source matter for career success, holding other accession characteristics constant?
- What other factors matter for career success, especially factors related to undergraduate education?
- Are there other potential costs or benefits that the Navy should factor into accession policy decisions?

Methodology



- We use univariate and bivariate probit estimation to calculate if accession attributes affect the probability of:
 - Promotion to O-3 given survival to 4 years
 - Promotion to O-4 given survival to 11 years
 - Promotion to O-5 given survival to 17 years
 - CO screen given survival to 17 years
 - Promotion to O-6 given survival to 21 years
- Separate estimation for surface warfare (SW), sub, and aviation
- URL accessions from FY 1976-96

Attributes That We Used to Predict Success

Accession source	College grades	College major	College Attributes and Selectivity	Race/Ethnicity	Other attributes
<ul style="list-style-type: none"> • OCS • USNA • NROTC • Enlisted through: <ul style="list-style-type: none"> - OCS - NROTC - USNA - Enlisted programs • Other sources 	<ul style="list-style-type: none"> • Average • Above-average • Below-average • Missing grades 	<ul style="list-style-type: none"> • Engineering • Science • Business • Other 	<ul style="list-style-type: none"> • HBCU • HSI • Minimally competitive • Moderately competitive • Most competitive • Missing school 	<ul style="list-style-type: none"> • White • Black • Hispanic • Other 	<ul style="list-style-type: none"> • Age • Female • Married • Lateral in by YOS 4 • Lateral out • FY indicator

What We Found Helps Predict Success

- Accession source helps determine early career success, even after controlling for other factors
 - Effect is biggest for USNA, then NROTC, then OCS
 - It matters less as careers progress (exception is USNA grads in aviation)
- Good undergraduate grades have a positive effect on the probability of promotion even late in the career
- SW officers from HBCU campuses have a lower predicted probability of promotion to O-4

What We Found

~~Doesn't Help Predict~~

Success

- College major
 - Caveat for the submarine community
- College selectivity
 - Caveat for results from other literature
- Level and performance of technical courses taken

What Other Studies Have Found

- Accessions from USNA are more likely to promote
- Accessions with high undergraduate grades are more likely to promote
- Mixed results on majors, technical background
- School quality has a positive effect on the probability of recommendation for early promote

Study

Recommendations

- Examine policies that may increase the predicted success of OCS recruits
- Keep minimum grade standards in place
- Consider emphasizing undergraduate grades more in accession decisions
- Examine further the HBCU effect on the estimated probability of promotion to O-4 in the SW community

Highlighting Some Diversity Issues

Top 25 Producers of Black Science and Engineering Bachelors Degrees

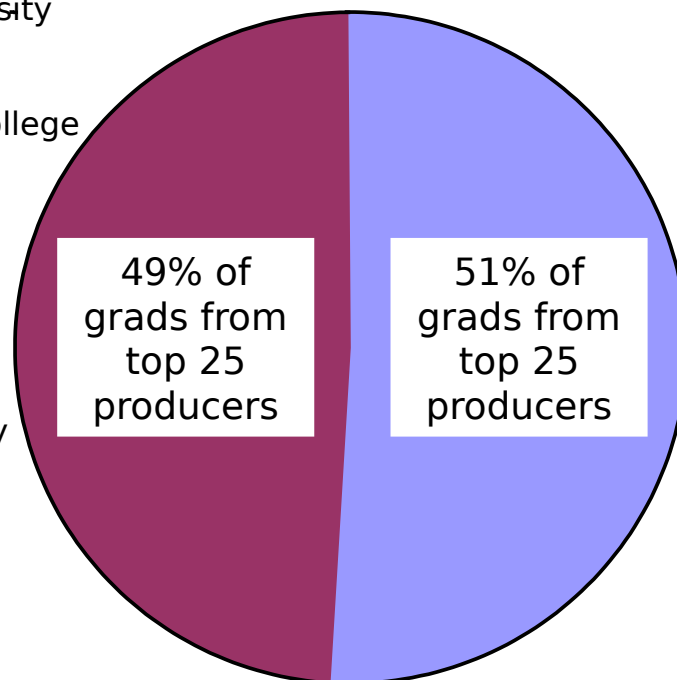
■ HBCU (average enrollment =5.3K)

■ Non-HBCU (average enrollment =19.9K)

16 HBCU schools

North Carolina A&T State University
Howard University
Florida A&M University
Southern University and A&M College
Spelman College
Xavier University of Louisiana
Hampton University
Morgan State University
Tuskegee University
Grambling State University
Morehouse College
North Carolina Central University
Prairie View A&M University
Norfolk State University
Jackson State University
Tennessee State University

1996 graduates



9 non-HBCU schools

University of Maryland at College Park
Rutgers, The State University
of New Jersey, New Brunswick
University of California at Los Angeles
University of Virginia
University of Michigan at Ann Arbor
City College of New York
Herbert H. Lehman College
University of North Carolina
at Chapel Hill
University of South Carolina
at Columbia

NROTC Campuses and Top 25 Producers of Black Scientists and Engineers

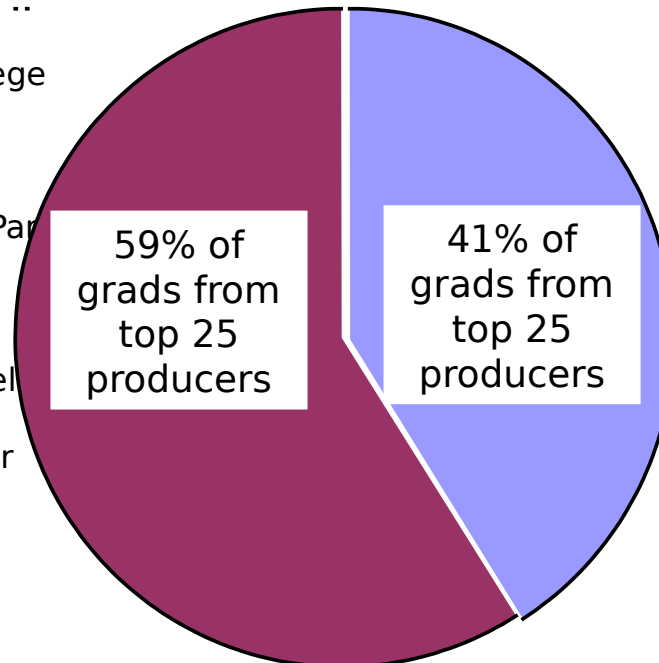
■ NROTC (Average enrollment = 11.5K)

■ Non-NROTC (Average enrollment = 8.8K)

15 NROTC schools

Howard University
 Florida A&M University
 Southern University and A&M College
 Spelman College
 Xavier University of Louisiana
 Hampton University
 University of Maryland at College Park
 Prairie View A&M University
 Norfolk State University
 Tennessee State University
 University of California at Los Angeles
 University of Virginia
 University of Michigan at Ann Arbor
 University of North Carolina at Chapel Hill
 University of South Carolina at Columbia

1996 graduates



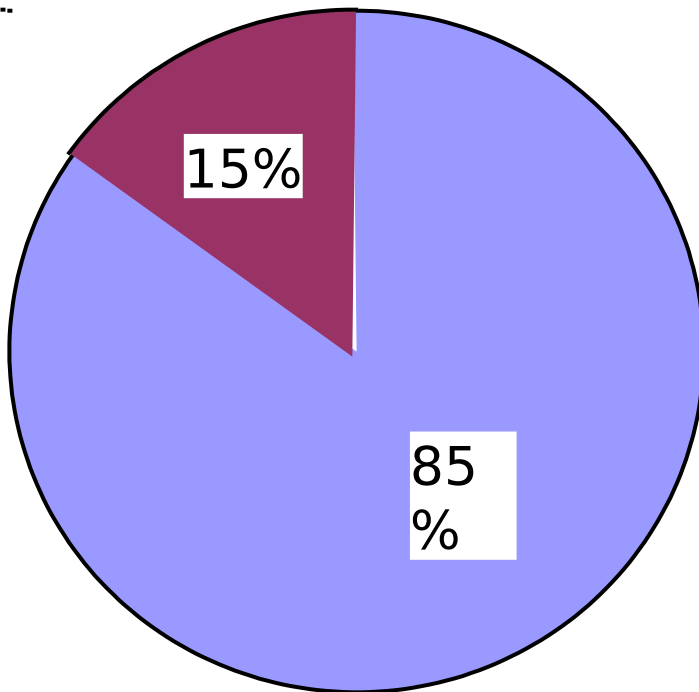
10 non-NROTC schools

North Carolina A&T State University
 Morgan State University
 Tuskegee University
 Grambling State University
 Morehouse College
 North Carolina Central University
 Rutgers, The State University of New Jersey, New Brunswick
 Jackson State University
 City College of New York
 Herbert H. Lehman College

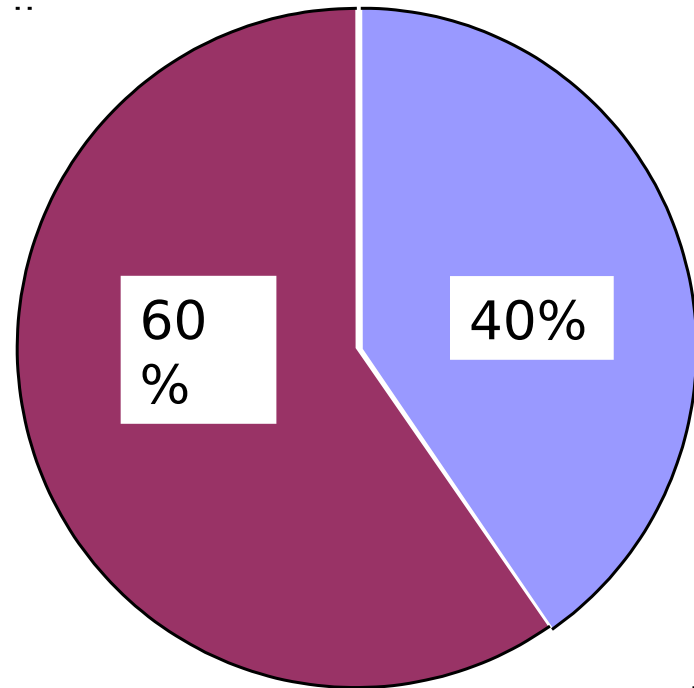
Science and Engineering Bachelor's Degrees Awarded in 1996 by Gender and Race

■ Men ■ Women

All graduates



Black graduates



From FY97-01, only 15% of black URL accessions were women